

BB-WSK-CBM-2

Wzzard™ Condition Based Monitoring Starter Kit



Introduction

Intelligent, Data Driven Maintenance

- Reactive maintenance plans wait for a failure to occur, causing disruption, greater repairs and downtime costs.
- Preventative maintenance plans eliminate the unplanned downtime, yet at the expense of sub-optimal and necessarily shorter maintenance cycles.
- The *best* maintenance plan is **data driven** to schedule updates and repairs just before performance loss, thereby lowering energy, maintenance and downtime costs.

The Wzzard Condition Based Monitoring Starter Kit does just that by providing a non-intrusive, easily installed solution for monitoring the temperature and vibration level of your motor or bearing without disrupting existing operations.

- Includes everything to monitor temperature and vibration on one motor or bearing.
- No equipment downtime - simply attach the sensor with the included magnetic base, connect the sensor to the wireless Wzzard node, and provide an Ethernet connection to the gateway.
- Supports dashboard, data trend lines, email/SMS alerts, data logging capabilities.
- Easily expand the Starter Kit system simply by adding more self-configuring Wzzard nodes and sensors to your existing gateway.
- Fast deployment of proof-of-concept and pilots. Easy to scale to hundreds or thousands of inputs from one location or multiple locations.

Easy to Deploy

- The Wzzard mesh wireless sensor node and sensor are battery powered and easily deployed without any special wiring. No need to install costly or intrusive wiring runs.
- Plug-and-play sensor wiring eliminates errors.
- Wzzard's 2.4 GHz wireless mesh technology continuously optimizes its channel selection to eliminate multipath interferences, providing best-in-class reliability in difficult RF environments.
- Simple, cloud-based configuration of the gateway makes it easy to deploy and manage one device or many.

Rugged & Reliable

- Wzzard mesh wireless sensor node is enclosed in an IP67, -40 to +80 °C rated housing for indoor and outdoor industrial use. No additional/external enclosure required.
- Advanced SmartMesh IP wireless mesh protocol provides excellent point-to-point wireless reliability and becomes more resilient as more nodes are added.

Features

- Monitor temperature and vibration level of a motor or bearing
- Set-and-go set up – no downtime, disruption or wiring/cable runs
- Built-in Node-RED™ software tool for easy deployment
- SmartMesh IP® wireless mesh for point-to-point, self-healing reliability
- More resilient as more nodes are added
- Easily scalable at any time to thousands of sensors
- IP67 indoor/outdoor rated (Wzzard node)
- NEMA TS2, RoHS-3

Ordering Information

Model No.	Description
BB-WSK-CBM-2	Wzzard Condition Based Monitoring Starter Kit

Included Hardware

- (1) BB-WSD2M3101P2K – Wzzard Wireless Sensor Node (industrial)
(2 analog inputs, M12 connector, external antenna)
- (1) BB-HS-104T2505402 – Ultra-low power temperature/vibration sensor
- (1) BB-MH112-1A – Magnetic mounting base
- (1) BB-WSDCBL-ACL-2 – M12 cable with signal conditioning
- (1) BB-SG30000525-42 – SmartSwarm 342 Ethernet Network Gateway (10-60 Vdc, 0.7A, Wzzard board, Ethernet cable, antenna, power supply, connector set, DIN mount bracket)
Note: one gateway supports up to 100 wireless sensor nodes.

Included Software

- Cloud license for WebAccess/DMP device management and configuration tool.
- Node-RED flow with Web server for:
 - Real time data display
 - Historian trending
 - Visual and email/SMS alerts
 - External data source integration (weather, Twitter feeds, and more)

Scalable

- Grow from monitoring one machine or circuit to many simply by adding more self-configuring sensor nodes and making simple dashboard edits.
- Use the built-in Node-RED to create and customize your own applications without any advanced programming skills.
- Expand to a multi-site system integrated into your preferred software platform. The popular MQTT protocol and JSON data format make it easy to integrate into third party software applications.

Specifications

Temperature	
Sensor Type	RTD PT100
Accuracy	±1 °C
Vibration	
Sensitivity	250mV/g
Frequency Response	0.3Hz (18cpm) to 10kHz (600kcpm) ±10%
Isolation	Base, isolated
Range	8g
Transverse Sensitivity	<5%
Amplitude Linearity	±1%
Weight	
Net Weight, total	1.2 kg (2.65 lb)
Gross Weight, total	2.36 kg (5.2 lb)

Dimensions	
Wizzard Industrial Wireless Sensor Node	115.93 x 95.25 x 65.15 mm (4.56 x 3.75 x 2.57 in)
Antenna	94.1h mm (7.64h in)
Temperature/Vibration Sensor	67h x 25w mm (2.64h x 0.98w in)
Magnetic Mounting Base	25.4 diameter x 17.8h mm (1.0 diameter x 0.7h in)
M12 Signal Conditioning Cable	2 m (6.56 ft)
SmartSwarm 342 Gateway	125w x 97d x 55h mm (4.92w x 3.82d x 2.17h in)
Regulatory – Approvals / Standards / Directives	
BB-WSK-CBM2 kit	RoHS-3, NEMA TS2
<i>See datasheet for each sub-model in kit for additional information.</i>	

Node-RED Dashboard

